Sample Collection/Creation Procedures

May 21, 2004 11:31:23

0800257 Clear Creek Superfund

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

Sample Collection/Creation Procedures

0800597 **Ogden Railyard**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
ERT2012	SAMPLE COLLECTION			
ERT2013	SAMPLE COLLECTION			
ERT2016	SAMPLE COLLECTION			
UNKNOWN	unknown procedures			

0800650 International Smelter

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
AECID5-8	res dust sample 5-8			
AECIGW4-1	groundwater sample 4-1			
AECILY1-4	lysimeter 1-4			
AECILY2-7	lysimeter 2-7			
AECIQC1-4	field qual control 1-4			
AECIRES5-5	residential soil 5-5			
AECISB5-4	soil boring 5-4			
AECISED3-1	sediment 3-1			
AECISS5-2	soil 5-2			
AECISW3-1	surface waters 3-1			
UNKNOWN	unknown			

0800852 Mystery Bridge Road - US Highway 20

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

0801194 Summitville Superfund site

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

Sample Collection/Creation Procedures

0801417 **Red Mountain Pass Zinc**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	un known			

0801478 California Gulch

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

Sample Collection/Creation Procedures

0801505 French Gulch Superfund site

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

081575 Slide Mine Boulder County CO

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

081700 Gilt Edge Mine

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

0834QB00 Cheyenne River

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

11113300 New Hampshire Dept. of Environmental Services

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BEACHPROG	Beach Program Sampling Procedures	Water Sampler	Wade into the water to knee depth. Wait for the water to be clear of debris that may have been disrupted when walking into the water. Or sample away from the disturbed area. Unscrew the bottle cap making sure not to touch the inside of the cap or neck with fingers or any other object. Hold the cap in one hand, and with the other hand turn the bottle upside down so the opening is facing the water surface. Make sure you never touch the opening of the bottle neck. With a downward thrust moving away from your body, dip the bottle at least a foot below the surface. Fill the bottle with one sweeping motion, and discard a few milliliters to allow some head (air) space. Replace the cap carefully over the bottle and tighten.	
RIVERPROG	Ambient and VRAP sampling procedures	Water Sampler	If a bridge station, bucket is lowered into main channel, rinsed twice w/river water, and 3rd bucket is used to fill sample bottles. For other stations, sample bottle is held in main channel and filled on the samplers' upstream side.	

1111REG1 USEPA, Region I

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB001	Charles River Water Sample Collection			Ray Thompson, 1998, Charles River Baseline Water Quality Study Sampling Procedures, U.S. EPA Office of Environmental Measurement and Evaluation, 1998 QAPP, page 9
MEAS001	Charles River Baseline Study Water Quality Field Measurement			Ray Thompson, 1998, Charles River Baseline Water Quality Study Field Measurement Procedures, U.S. EPA Office of Environmental Measurement and Evaluation, 1998 QAPP, page 22

1117MBR **US EPA Region 7**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FISH-BMES	Floatable Stream/Lake Game & Rough Fish Survey	Electroshock	Boat-mounted electroshock, DC or AC current.	Kansas Biological Survey, 1993, Watershed Monitoring Manual, Ecotoxicology Program. U of Kansas, Lawrence, KS., 47pp.
FISH-BPES	Wadable Stream Game & Rough Fish Survey	Electroshock	Uses backpack electroshock unit	Kansas Biological Survey, 1993, Watershed Monitoring Manual, Ecotoxicology Program. U of Kansas, Lawrence, KS., 47pp.
SOP2333.2	Flow Measurement	Miscellaneous/Other		USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.1	Routine Sample Collection (water)			USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.11	Biological Sample Collection			USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.12	Collection & Id of Surface Floating Pupal Exuviae Chrironomi		"Collection & Identification of Surface Floating Pupal Exuviae of Chrironomidae for Use in Studies of Surface Water Quality"	USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.13	Sampling Fish for Tissue Residue Determinations	Electroshock	This SOP establishes uniform procedures for the collection, identification and preservation of fish whose tissues are to be chemically analyzed.	USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.14	Tubing Blanks	Water Sampler		USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.16	Spiking Samples of Whole Fish in the Field for Total Bias &	Miscellaneous/Other	"Spiking Samples of Whole Fish in the Field in Preparation for Estimating the Total Measurement Bias and Total Measurement Precision of a New Analyte"	USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.18	Technical Considerations in Design of Fish Collection for WQ		"Technical Considerations in the Design of Fish Collection Activities for Water Quality Assessments"	USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.19	Technical Considerations in Selection of Ref and Control Sit		"Technical Considerations in the Selection of Reference and Control Sites for Water Quality	USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND

1117MBR **US EPA Region 7**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
			Evaluation"	QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP2334.2	Priority Pollutant Sample Collection	Water Sampler		USEPA, REGION 7, ENVIRONMENTAL SERVICES DIVISION, 2000, OPERATIONS AND QUALITY ASSURANCE MANUAL, EPA, R7, .
SOP4230.8	Sediment Sample Collection			

1119USBR **Bureau of Reclamation**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	GRAB			

11DELMOD **Delaware River Basin Commission**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BFN	Delaware River Macroinvertebrates	Net/Non-Tow	Big-River Frame Net - 2x3ft 500u rectangular frame net with bottom frame 2x2ft (mfd by Wildco)	
DFRAME	Macroinvertebrate Sampler - D-Frame Kick net	Net/Non-Tow	D-Frame Kick Net, standard RBP size, 595u (mfd by Wildco)	
KICKRECT	Macroinvertebrate Sampler - Rectangular Frame Kicknet	Net/Non-Tow	Rectangular Frame Kicknet, standard size, 595u (mfd by Wildco)	
WATER	Water Samples - Ambient River or Tributary Samples	Water Sampler	Bottle attached to line lowered from bridge or collected by wading	

1VTDECWQ Vermont Dept of Environmental Conservation

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
COLL-01	Water Bottle Sampling	Water Sampler	Grab sample from surface at about 0.2 meter depth (Method 2.2.1).	VTDEC-02 - Vermont Department of Environmental Conservation, 1989, Field Methods Manual, Vermont Department of Environmental Conservation, entire manual
COLL-02	Water Kemmerer Sampling	Water Sampler	Kemmerer sample at depth (Method 2.2.3).	VTDEC-02 - Vermont Department of Environmental Conservation, 1989, Field Methods Manual, Vermont Department of Environmental Conservation, entire manual
COLL-03	Water Hose Sampling	Water Sampler	Composite sample using hose at depth (Method 2.2.2).	VTDEC-02 - Vermont Department of Environmental Conservation, 1989, Field Methods Manual, Vermont Department of Environmental Conservation, entire manual
COLL-04	Water Vertical Composite - Champlain	Water Sampler	A single, vertically integrated sample was collected using a compositing procedure that was designed so that the sample concentration results would correspond approximately to the vertical "mixed-reactor" assumption to be used in the lake model. The sample depths for the vertical composite samples were chosen to represent the midpoints of lake strata having approximately equal volumes. The composite samples were intended to represent the concentration that would exist if the water column were completely mixed vertically.	VTDEC-04 - Vermont Dept. of Environmental Conservation, 1997, A Phosphorus Budget, Model, and Load Reduction Strategy for Lake Champlain, Vermont Dept. of Environmental Conservation, p 8
COLL-05	Water Vertical Composite - Streams	Water Sampler	In smaller, well-mixed streams where lateral concentration gradients wre unlikely to exist (based on visual judgement), only one vertically integrated sample was collected on each sampling date at the centroid of flow (point-fo greatest depth-velocity product). At sites where the stream width was greater, up to five vertical samples were obtained at equal width increments across the stream and proportionately composited into a single sample.	VTDEC-04 - Vermont Dept. of Environmental Conservation, 1997, A Phosphorus Budget, Model, and Load Reduction Strategy for Lake Champlain, Vermont Dept. of Environmental Conservation, p 8
COLL-06	Water Vertical Composite -	Water Sampler	A composite sample collected that represents	VTDEC-06 - Vermont Department of

1VTDECWQ Vermont Dept of Environmental Conservation

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
	Unstratified		three discrete depths in the water column: 2 meters below the lake surface, mid-depth, and approximately 2 meters above the lake bottom.	Environmental Conservation; New York State Department of Environmental Conservation, 2003, Lake Champlain LTM Workplan/QAPP, Vermont Department of Environmental Conservation, 28
COLL-07	Water Vertical Composite - Epilimnion	Water Sampler	A composite sample collected that represents three discrete depths in the water column in the epilimnion: 2 meters below the lake surface, mid-depth in the epilimnion, and approximately 2 meters above the upper knee of the thermocline.	VTDEC-06 - Vermont Department of Environmental Conservation; New York State Department of Environmental Conservation, 2003, Lake Champlain LTM Workplan/QAPP, Vermont Department of Environmental Conservation, 28
COLL-08	Water Vertical Composite - Hypolimnion	Water Sampler	A composite sample collected that represents two discrete depths in the water column in the hypolimnion: mid-depth in the hypolimnion, and approximately 2 meters above the lake bottom.	VTDEC-06 - Vermont Department of Environmental Conservation; New York State Department of Environmental Conservation, 2003, Lake Champlain LTM Workplan/QAPP, Vermont Department of Environmental Conservation, 28
COLL-09	Water Plastic Kemmerer Sampling	Water Sampler	Plastic kemmerer sample at depth (Method 2.2.3).	VTDEC-02 - Vermont Department of Environmental Conservation, 1989, Field Methods Manual, Vermont Department of Environmental Conservation, entire manual

211WVOWR Division of Water and Waste Management

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB01	Grab Sampling		Use Bucket, otherwise dip containers into waters	
SAMPLING02	Bottom Sampling	Water Sampler		

21ARIZ **Arizona Department of Environmental Quality**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
STANDARD	Arizona Standard Collection Procedures		See the Arizona Department of Environmental Quality Quality Assurance Program Plan.	

21ARIZGW **Arizona Department of Environmental Quality**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
STANDARD	Arizona Standard Collection Procedures		See the Arizona Department of Environmental Quality Quality Assurance Program Plan.	

21AS American Samoa Environmental Protection Agency

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SAMOA-01	Samoa Enterrococus Sample Collection			

21COL001 Colorado Dept. of Public Health & Environment

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
HISTORIC	Historic procedure used for legacy data	Miscellaneous/Other		

21FLA **FL Dept. of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
WQ01	Routine Water Quality Samples	Water Sampler	All samples taken at mid depth unless other wise noted.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
WQ02	Water nutrient samples	Water Sampler	All samples taken at mid depth unless otherwise noted.	
WQ03	Water algal samples	Water Sampler	Includes chlorophyll/phaeophytin and phytoplankton samples. These are collected at mid secchi depth.	
WQ04	Water Quality Metal Sampling	Water Sampler		
WQ05	Bacteria Sampling	Water Sampler	Whirl pack bags filled directly. Placed in wet ice immediately after collection. Delivered to lab within 6 hours of collection.	

21FLBROW **Broward Co Dept of Natural Resource Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FP-001	Grab sample	Water Sampler	Kemmerer sample bottle is used to obtain a water sample which is then transferred to individual sample bottles.	
FP-002	BIOPIGMENT FILTRATION		MAGNESIUM CARBONATE IS ADDED TO 100 ML OF WHOLE WATER SAMPLE WHICH IS FILTERED THROUGH A 0.45 MICRON MEMBRANE FILTER AND PLACED INTO A 20 ML GLASS VIAL COVERED IN FOIL. TWEEZERS ARE USED TO PREVENT CONTACT WITH THE FILTER.	
FP-003	Equipment blank	Water Sampler	Laboratory water is poured into the Kemmerer sample then distributed to the various sample bottles.	

21FLCBA **Choctawhatchee Basin Alliance**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
ANALYSIS	TN, TP & CHLA		WATER WHICH IS FROZEN OR FILTERED SENT TO LAKEWATCH LAB FOR ANALYSIS.	
REALTIME	HYDROLAB AND SECCHI DISK READINGS		HYDROLAB READINGS OBTAINED FOR SURFACE & BOTTOM SAMPLES. SURFACE SAMPLES ARE TAKEN 1.5 FT FROM THE SURFACE OF THE WATER. BOTTOM SAMPLES ARE TAKEN 1-1.5 FT FROM THE SURFACE OF THE SEDIMENT. SECCHI DISK - MEASURED BY FT. WHERE VANISHES IN THE WATER.	

21FLCEN **Florida Department of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
COMPLAINT	Special investigations in response to complaints			
GRAB-1	Standard Operation Procedure			
LAKES	Reference lakes sampling protocols	Water Sampler	Samples are taken 0.3 meters subsurface.	
SEDIMENT	Sediment Collection	Benthic Grab		
STREAMS	Stream Condition Index and Fixed Trend Monitoring Protocols	Water Sampler	Samples are taken at mid-depth with a van Dorn water sampler, and transported on ice in HDPE bottles. Water samples for coliform analysis are obtained at sub-surface levels.	
TMDL	Total Maximum Daily Load			

21FLCHAR **FDEP Charlotte Harbor Aquatic/Buffer Preserves**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab Water Quality Samples			

21FLCOLL Collier County Pollution Control (Florida)

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FIELD	Collier County Field Measurements			
GRAB	Collier County Water Sampling Collection Procedure			

Sample Collection/Creation Procedures

21FLCPSJ City of Port St. Joe Wastewater Treatment Plant (Florida)

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SCP-001	Water Grab Sampling			

21FLDOH **Division of Environmental Health, Bureau of Water Programs**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB1	Sample Collection Procedure		Based on EPA SOPs	USEPA, 1978, Microbiological Methods for Monitoring the Environment: Water and Wastes., USEPA, EPA 600/8-78-017

21FLEECO **Lee County (Florida)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
LCEL	Lee County Environmental Labs SOP		Lee County Environmental Laboratories SOP	Lee County Environmental Laboratory, 2002, Standard Operating Procedures, Lee County, unknown

21FLFMRI Florida Fish & Wildlife C C / Marine Research Institute

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
PROC 1	Hydrolab Water Measurements		Hydrolab measurements of water	U.S. Environmental Protection Agency, 2001, National Coastal Assessment: Field Operations Manual, Office of Research and Development, National Health and Environmental Effects Research Laboratory. Gulf Ecology Division, EPA 620/R-01/003
PROC 7.4	Sediment Toxcity Sampling		Samples sent to DEP and EPA for lab analysis. Only raw results received from these organizations.	Welch, P.S., 1983, Methods for Chemical Analysis of Water and Wastes., Blankston Co., EPA 600/4-79-020
SCP-ALL	Field Sample Collection Procedures			U.S. Environmental Protection Agency, 2001, National Coastal Assessment: Field Operations Manual, Office of Research and Development, National Health and Environmental Effects Research Laboratory. Gulf Ecology Division, EPA 620/R-01/003

21FLFTM **Florida Department of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	watersample collection	Water Sampler		
HYDRO	hydrolab#??	Miscellaneous/Other		

21FLGCWW Gilcrist County Well Watch

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
M001	Bacteria - coliform/strep	Water Sampler		
N001	Nutrients - sulfuric acid	Water Sampler	Nutrient samples acidified to pH 2 with sulfuric acid	

21FLGFWF Florida Fish and Wildlife Conservation Commission

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Routine water chemistry grab sampling	Water Sampler	Collect water sample from side of boat or off bridge in triple-rinsed sampbottle from just below surface of water (approximately 10 cm). Specific depth samples collected with a plastic Van Dorn water sampler then placed in a triple-rinsed sample bottle.	
SP-002	Mercury lakes water chemsitry sampling	Water Sampler		

21FLGPC **Gulf Power Company (Florida)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Surface Water Grab Sample			

21FLGW **FL Dept. of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
900456	SOP		Sample procedures are given in QA Plan.	Laura Morse, 2000, Florida Ambient Monitoring Network Quality Assurance Plan, FDEP, vol 1
SPRING-1	Spring Sampling SOP #1			Scott and others, 2002, Florida Geological Survey Open File Report No. 85, Florida Geological Survey, vol 1

21FLHILL **Hillsborough County Environmental**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
WS-1	Grab			

21FLIMCA **IMC Agrico (Florida)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab sample			

Sample Collection/Creation Procedures

21FLJXWQ **City of Jacksonville**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SCP-001	Discrete grab with bottle			
SCP-002	Discrete grab with VanDorn			
SCP-003	Integrator tube 2.5 meters			

21FLKWAT **Florida LAKEWATCH**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab Sample			

21FLLCHD **Lee County Hyacinth Control District (Florida)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab sample			

21FLLCPC **Lake County Water Resource Management**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FP001	SURFACE WATER GRAB SAMPLE		DEP-SOP-001/01, FS2100	FDEP, 2001, DEP STANDARD OPERATING PROCEDURES FOR FIELD ACTIVITIES, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, ALL PAGES
FP002	GROUND WATER GRAB SAMPLE		DEP-SOP-001/01 FS2200	FDEP, 2001, DEP STANDARD OPERATING PROCEDURES FOR FIELD ACTIVITIES, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, ALL PAGES
FP003	WASTE WATER GRAB SAMPLE		DEP-SOP-001/01, FS2400	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
FP004	DRINKING WATER GRAB SAMPLE		DEP-SOP-001/01, FS2300	FDEP, 2001, DEP STANDARD OPERATING PROCEDURES FOR FIELD ACTIVITIES, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, ALL PAGES
FP005	SJRWMD SAMPLE PROCEDURES FOR VOLUNTEERS			ROBERT FREASE, Ph.D, 1998, WATER QUALITY MONITORING MANUAL FOR VOLUNTEERS IN THE ST. JOHNS RIVER WATER MANAGMENT DISTRICT, ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, ALL PAGES

21FLLOX Loxahatchee River District

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB-01	Water Sampling, grab			
GRAB-02	Water Sampling from Bridge, grab	Water Sampler		

21FLLOXB Loxahatchee River District

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
CORE	Benthic Corer	Benthic Corer		
H-D	Hester-Dendy	Trap/Substrate		

21FLMANA Manatee County Environmental Management Dept (Florida)

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FPRMP	RAMP Sample Collection Procedure	Water Sampler	EMD RAMP program sample collection procedure.	
FPSWP	SWAMP Sample Collection Procedure	Water Sampler	EMD SWAMP program sample collection procedure.	

21FLMCGL McGlynn Laboratories, Inc

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB-1	Lake Ecology		Water surface sample and bottom. Surface sample is a grab. Bottom sample is a niskin sampler. Water must be over 1.5 meters deep to have a surface in the bottom otherwise a mid-water is taken.	STAFF, 1992, FDEP Field Sampling SOP, FDEP, v1

21FLNWFD **Northwest Florida Water District**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
COLLECT-S	Ponar dredge sediment sample collection	Benthic Dredge	Stainless steel petite ponar dredge	
COLLECT1	Surface Water Sample			DEP, 2001, Surface water sample collection, DEP, 1

21FLORAN **Orange County Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	to be updated			

21FLORL **Orlando Streets Drainage Stormwater Utility Bureau(Florida)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FDEPSOP	FDEP SOP			

21FLPBCH Palm Beach County Environmental Resources Managemnt(Florida)

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab Sample	Water Sampler	Grab sample is collected with a Wildco (Wildlife Supply Company) Kemmerer, performed according to the DEP Standard Operating Procedures Manual (previously CompQAP).	

21FLPCSW **PROJECT COAST - Southwest Florida Water Management District**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	GRAB SAMPLE			

21FLPDEM **Pinellas County Dept. of Environmental Management**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SOP	SOP			
SP-001	water grab sampling	Water Sampler	see below, use of any configurations of water samplers - alpha horizontal bottle, buckets, or container immersion as cited in section 6.0	Pinellas County Department of Environmental Management, 1998, 1998 Comprehensive Quality Assurance Plan, Pinellas County Department of Environmental Management, 1
SP-002	sediment sampling	Benthic Grab		
SP-003	seagrass sampling	Miscellaneous/Other		
SP-004	fish sampling	Net/Non-Tow		
SP-005	wildlife sampling	Trap/Substrate		

21FLPNS **Florida Department of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	NWD Water Quality Parameters			Bureau of Laboratories Environmental Assessment Section, 2002, DEP Standard Operating Procedures for Field Activities, FDEP, VOL 1 and FS2100
TMDL	SOP NWD Grab Sample	Miscellaneous/Other		

21FLPOLK **Polk County Water Resources**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-01	Water Grab Sampling			DEP Methods, 1992, DEP Standard Methods, DEP, ALL
SP-02	Sample Collection Procedure			DEP Methods, 1992, DEP Standard Methods, DEP, ALL
SP-03	Secchi			DEP Methods, 1992, DEP Standard Methods, DEP, ALL

21FLRCID **Reedy Creek Improvement District - Env Services (FLORIDA)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SW1-WS	Surface Water Collection (Water Sampler)	Water Sampler		
SW2-BC	Surface Water Collection (Benthic Corer)	Benthic Corer		
SW3-TS	Surface Water Collection (Trap/Substrate)	Trap/Substrate		
SW4-NVT	Surface Water Collection (Net/Vertical Tow)	Net/Vertical Tow		
SW5-MISC	Surface Water Collection (Miscellaneous/Other)	Miscellaneous/Other		

21FLSARA **Sarasota County Environmental Services**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SOP-1	Standard method			

21FLSCCF **Sanibel Captiva Conservation Foundation (Florida)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	grab sample			

21FLSEM Seminole County (Florida)

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SOP-1	Grab Sample			

21FLSFWM **South Florida Water Management District**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
WS1	WATER SAMPLING			USEPA, 1999, EPA Methods and Guidance for the Analysis of Water, Version 2.0., USEPA, EPA 821/C-99-008

21FLSJWM St. Johns Water Management District

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
1	SDB Legacy Data		Procedure created to facilitate entering legacy SDB data SDB. Contact the STORET Contact Person of the Organization for details.	

21FLSUW **Suwannee River Water Management District**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab Sample			

21FLSWFD Southwest Florida Water Management District

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
870100-G	SWFWMD Quality Assurance Plan			SWFWMD Laboratory (CompQAPP). Water Quality Monitoring Program (Section SOP), 2002, Southwest Florida Water Management Distict SOP's for Water Quality Monitoring, Southwest Florida Water Management District, 1
GRAB	To be updated			
WQ-1	SWFWMD SOP's for the Collection of Water Quality Samples		The agencies standard collection procedures can be found in either the SWFWMD Laboratory CompQAPP, or the WQMP sections' SOP manual.	SWFWMD Laboratory (CompQAPP). Water Quality Monitoring Program (Section SOP), 2002, Southwest Florida Water Management Distict SOP's for Water Quality Monitoring, Southwest Florida Water Management District, 1

21FLTPA **Florida Department of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SOP-1	Standard Grab Sampler			

21FLVEMD Volusa County Environmental Health Lab

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SOP-1	Water Sampler Standard Operation Procedure			
SP-001	Water Grab Sampling		Horizontal Van Dorn used to collect mid-depth sample for physical, filtered nutrient, and unfiltered nutrient fractions, and mid-secchi sample for chlorophyll fraction.	Compiled by Melissa Bouchelle, 1993, Indian River Lagoon Water Quality Monitoring Network QA / QC Manual, SJRWMD Indian River Lagoon National Estuary Program, Section 7.0, Page 1

21FLWPB **Florida Department of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Direct Field Measurements using Intrumentation	Miscellaneous/Other		
SP-002	SEDIMENT SAMPLING	Benthic Dredge		
SP-003	Water quality grab sampling			
SP-004	sampling in field	Miscellaneous/Other		
SP-011	AMBIENT AIR SAMPLING			

21FLWQA **Florida Department of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab sample		Involves the attainment of a water sample by filling a container in the stream, lake, river or estuary itself.	

21GAEPD Georgia Environmental Protection Division

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
EPD SC001	EPD /WPB Ambient Stream Sampling Procedure	Water Sampler	Standard EPD/WPB Ambient Stream Water Collection Method. Three samples are collected at equal horizontal intervals and composited. No depth integration. Various sample collection devises ranging from Stainless pail to dedicated water samplers.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
EPD SC002	EPD/WPB Lake Water sampling procedure	Water Sampler	Standard EPD/WPB Method for collecting water samples from Reservoirs.	
USGS-PRO-1	Sample Collection Procedure for DNR GA	Water Sampler	USGS Water Sample Collection Procedure. Horizontal and depth integrated stream sample taken from either a bridge or culvert or by wading stream. Ten depth integrated samples taken at equal intervals across stream width with isokenetic sampler device.	Wilde, Franceska D.: Radtke, Dean B.; Gibs, Jacob; Iwatsubo, Rick T., 1998, Handbook for Water Resources Investigations, National Field Manual for the Collection of Water-Quality Data, Book 9, USGS, Chapter A-4

21GUAM **Guam Environmental Protection Agency**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GUAM-01	Guam EPA Legacy Sampling Procedures			

21HI Hawaii Dept. of Health

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB01	Ambient Bacti Sampling	Water Sampler	Direct collection of a water sample using the sample bottle/bag. Or use of a container to collect a water sample.	
GRAB02	Ambient monitoring using an instrument	Water Sampler	Measurement of water quality parameters using an electronic instrument such as the Hydrolab/datasonde, YSI DO meter or a pH meter.	
GRAB03	Ambient physical/chemical parameter monitoring	Water Sampler	Collection of water samples for laboratory analysis. Does not include in situ measurements using an instrument.	
HISTORIC-1	Historic Hawaii Sample Collection methods for legacy STORET			

21IOWA Iowa Dept. of Natural Resources

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BEA001	IDNR Parks Beach Sampling - Grab Sample	Water Sampler		
BEA002	IDNR Parks Beach Sampling - Composite Sample	Water Sampler	Sample is a composite of water collected at 9 sites (3 transects along the beach, collected samples in 3 different depths of water). DO, water temp., turbidity and pH are also collected in the field. Rainfall provided by parks staff.	
FM001	Standard IDNR-GSB Sampling procedure for Floyd-Mitchell	Water Sampler	For well nests, the sample is collected by either airlifting or bailing the well. For private wells, the sample is collected by turning on a hydrant and letting water flow for a couple of minutes. Tiles and streams collected directly	
SNY001	Standard IDNR-GSB Sampling Procedure for Sny Magill	Water Sampler	Samples collected in runs in the stream in the main flow while facing upstream. Water temperature, dissolved oxygen, turbidy, and conductivity measured at the same time.	
UHL001	Standard UHL Sampling Procedure - Grab Samples	Water Sampler	Grab samples are collected by dipping a HPDE bottle from bridge. When there is ice cover, a hole in the ice is chopped and the HPDE bottle is dipped for sample collection at the ice surface. Dissolved Oxygen collected in stainless steel container.	
UHL002	UHL-Composite Sampling Procedure for TMDL	Water Sampler	Samples collected in an automated sampler, which typically collects a sample every 20 minutes and run for 24 hours total. The samples are brought back to the UHL, where the samples are composited based on flow (pre-peak vs. post peak periods).	

21KY **Kentucky Division of Water**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
AWM-SOP	KENTUCKY AMBIENT/WATERSHED WATER QUALITY MONITORING SOP		This contains agency's standard water quality collection procedures for rivers and lakes. Prject specfic citations can be entered in the CITATIONS data entry screen, and can be selected below.	KENTUCKY DIVISION OF WATER, WATER QUALITY BRANCH, 2002, KENTUCKY AMBIENT/WATERSHED WATER QUALITY MONITORING STANDARD OPERATING PRODEDURE MANUAL, KENTUCKY DIVISION OF WATER, 1

21MICH **Michigan Department of Environmental Quality**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
AUTO	Automatic Water Sampler	Water Sampler		
CORE	Sediment Core Samples	Benthic Corer		
FIELD	Field Samples, not analyzed in the lab	Water Sampler		
GRAB	Grab Sample	Water Sampler		
SCOOP	Sediment Sampler	Miscellaneous/Other		
TOW	Algal Tow	Net/Vertical Tow		

21NC01WQ NCDENR-DWQ

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab sample		Grab water sample taken just below the surface.	NC DWQ Water Quality Section, 1996, Standard Operating Procedures Manual Physical and Chemical Monitoring, NC DWQ Water Quality Section, All
ISCO	ISCO sample	Water Sampler	Grab sample taken by automated ISCO sampler.	NC DWQ Water Quality Section, 1996, Standard Operating Procedures Manual Physical and Chemical Monitoring, NC DWQ Water Quality Section, All
LEGACY	LEGACY			
PHOTIC	Photic zone composite sample	Water Sampler	Composite sample of the entire photic zone (defined as twice the secchi depth); taken using a LabLine PolyPro sampler.	NC DWQ Water Quality Section, 1996, Standard Operating Procedures Manual Physical and Chemical Monitoring, NC DWQ Water Quality Section, All

21NC02WQ NCDENR-DWQ (2nd)

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab Sample		Grab water sample taken just below the surface.	WQS SOP - NC DWQ Water Quality Section, 1996, Standard Operating Procedures Manual Physical and Chemical Monitoring, NC DWQ Water Quality Section, All
ISCO	ISCO Sample	Water Sampler	Grab sample taken by automated ISCO sampler.	WQS SOP - NC DWQ Water Quality Section, 1996, Standard Operating Procedures Manual Physical and Chemical Monitoring, NC DWQ Water Quality Section, All
PHOTIC	Photic Zone Composite Sample	Water Sampler	Composite sample of the entire photic zone(defined as twice the secchi depth); taken using a LabLine PolyPro sampler.	WQS SOP - NC DWQ Water Quality Section, 1996, Standard Operating Procedures Manual Physical and Chemical Monitoring, NC DWQ Water Quality Section, All

21NDHDWQ **North Dakota Dept. of Health**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
STANDARD	Standard Sample Collection Procedure for North Dakota			Michael J. Ell, 1993, Standard Operating Procedures for Field Samplers, N.D. State Department of Health and Consolidated Laboratories, 1

21NEB001 Nebraska Dept. of Environmental Quality

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
CUBIE1	Cubie Transport Container	Miscellaneous/Other	COLLECT AND PRESERVE SAMPLES IN ACCORDANCE WITH SOP	John Bender, 1998, DEQ SOP, NDEQ, 1
FIELD	FIELD COLLECTION PROCEDURES		PARAMETERS TO BE COLLECTED IN THE FIELD: DO, pH, CONDUCTIVITY, TEMPERATURE (C)	John Bender, 1998, DEQ SOP, NDEQ, 1
GRAB	GRAB	Miscellaneous/Other	GRAB SAMPLE FROM SURFACE OR AS SPECIFIED BY THE SAMPLING PLAN	
REMAP	BIOLOGICAL SAMPLING PROCEDURES	Electroshock	FISH SAMPLING WHILE DOING STREAM ASSESSMENTS STATEWIDE	SURFACE WATER SECTION, 1995, S.O.P. on the Development of Data Quality Objectives., Nebraska Department of Environmental Quality, 1
WATERB	Water bottle	Miscellaneous/Other	COLLECT AND PRESERVE WATER SAMPLES IN APPROPRIATE CONTAINERS IN ACCORDANCE WITH S.O.P.	John Bender, 1998, DEQ SOP, NDEQ, 1

21NJDEP1 NJ Department of Environmental Protection

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
10	Equal width increment (EWI)	Water Sampler		
30	Single Vertical	Water Sampler		
303D-SED	303(d) Sediment Samples		Samples collected from multiple points across the stream, composited, filtered through a sieve and placed in sample containers.	
303D-WAT	303(d) Water Samples		Metals samples collected from centroid of flow into metals grade containers by a gloved "clean hands" person. VO samples as grabs. Other samples collected as multi-point composits. Dissolved sample filtered in the field (in bag chamber for metals).	
40	Multiple Verticals	Water Sampler		
50	Point Sample	Water Sampler		
70	Grab Sample (DIP)	Water Sampler		
8010	USGS Groundwater Sampling Procedure	Water Sampler		
BACT	Bacteriology sample collection procedure	Water Sampler	Samples are collected directly into steralized bacteriological containers. Sample bottles are filled to shoulder of bottle, stoppered and then shaken to aerate and mix.	NJDEP, 1992, Field Sampling Procedures Manual, New Jersey Department of Environmental Protection, p. 1-360
ES1	Electroshocking	Electroshock		
EWI	Equal Width Increment - Equal Transite Rate	Water Sampler	A stream transect is divided into equally spaced verticals. A sample bottle is lowered and raised at a uniform rate at each vertical. The bottle's contents are poured into a churn splitter. The churn's contents are mixed & dispensed into sample bottles .	
EWI-CHURN	Equal Width Increment (EWI) Equal Transit Rate (ETR)	Water Sampler	A stream transect is divided into equally spaced verticals. A sample bottle is lowered and raised at a uniform rate at each vertical. The bottle's contents are poured into a churn splitter. The churn's contents are mixed & dispensed into	

21NJDEP1 NJ Department of Environmental Protection

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
			sample bottles .	
EWI-CLEAN	Equal Width Increment - Equal Transit Rate Clean Methods			
FSPM-7F1	Stream Sampling Procedures	Water Sampler		
FSPM-7F3	Grab samples from marine and estuarine waters	Water Sampler		
GRAB	Grab Sample	Water Sampler	Water sample collected from centroid of flow directly into sample container.	
GRAB-C	Grab Sample - Clean Methods	Water Sampler	Gloved "clean hands" person collects samples directly into trace metal grade containers from centroid of flow.	
GRAB-CD	Grab Sample - Clean Methods Dissolved	Water Sampler	Gloved "clean hands" person collects sample from centroid of flow into metals grade container. Sample pumped through filter in bag chamber in field. Metals grade sample containers rinsed 3x with sample then filled.	
GRAB-D	Grab Sample - Dissolved	Miscellaneous/Other	Sample is collected from the centroid of flow and filtered through a 0.45 micron filter into clean sample containers the field.	
MW-N-COL	Marine Water Nutrient collection for majority of nutrients		All nutrients with exception of Ammonia are collected in 1 50mL centrifuge tube. All bottles are put on ice.	
MW-N-COL1	Marine Water Collection of Dissolved Oxygen		Collected in 250mL glass BOD bottle. 1mL alkali iodide azide and 1mL of manganous sulfate are added while in the field. When the lab receive this, they add 1 mL of concentrated sulfuric acid.	
MW-N-COL2	Marine Water collection of chloraphyll a		Collected in 250mL amber bottle. It is then put on ice.	
MW-N-COL3	Marine Water Collection of Ammonia		Ammonia samples are collected in a 50mL centrifuge tube. In the field, 1 mL of 3.5% phenol is added to the tube. It is then put on ice.	
POINT	Point Sampling	Water Sampler	Sample is collected from a single depth	

21NJDEP1 NJ Department of Environmental Protection

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
RBP-1	Macroinvertebrates sampling	Benthic Grab		Michael T. Barbour, Jeroen Gerritsen, Blaine D. Snyder, James B. Stribling, 1999, Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers, USEPA, Office of Water, 7-7
RBP-KICK	EPA Rapid Bioassessment Protocols Kick Net	Net/Non-Tow		
SED	Sediment Sampling	Miscellaneous/Other		
SED-COMP	Sediment - Composite	Miscellaneous/Other	Sample is collected from multiple points in the streambed, mixed in a tray, filtered through a sive and placed in a sample container.	
SED-GRAB	Sediment - Grab Sampling	Miscellaneous/Other	Sample collected from a single point	
SED-PONAR	Sediment Composit Sampling with Petite Ponar Dredge	Benthic Dredge		

21NMEX **NM Environmental Dept./SWQB**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Water Grab Sampling			American Public Health Association, 1998, Standard Methods for the Examination of Water and Wastewater, 20th Edition., American Public Health Association, 20th Edition
SP-002	Water Composite Sample			

21OHDGW **Ohio EPA Division of Drinking and Ground Waters**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SCCP-001	Water Grab Sampling		Field acquisition of a ground water grab sample for the Ambient Ground Water Monitoring Network	Ohio EPA-DDAGW, 2002, Operating Procedures Document, Ohio EPA, 3-1 to 3-15

21PA Pennsylvania Department of Environmental Protection

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
CHLORO	1-47mm glass fiber filter in petri dish		1-47 mm glass fiber filter in petri dish	
CONT 10	500mL non-precleaned plastic Bottle			
CONT 11	125mL prefixed plastic bottle (fecal coliform)			
CONT 2	Ziplock Bag 9"x13"	Water Sampler		
CONT 3	1000 ml wide mouth Nalgene polyproplene	Water Sampler		
CONT 4	500 ml precleaned plastic bottle	Water Sampler		
CONT 5	125 ml precleaned plastic bottle	Water Sampler		
CONT 6	500 ml glass bottle (white cap & special label)	Water Sampler		
CONT 7	500 ml glass bottle (black cap & wide mouth)	Water Sampler		
CONT 8	1L amber glass bottle	Water Sampler		
CONT 9	125 ml plastic bottle (sterlized, blue cap)	Water Sampler		
MACRO	Macroinvertbrate Collection	Net/Non-Tow		
SHOCK	Electrofishing using a fish shocker	Electroshock		

21SC60WQ **SC Dept. of Health & Environmental Control**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
WQ SAMP	Collection of water for field analysis	Water Sampler		South Carolina DHEC Environmental Control Office - Bureau of Water, 1997, Envrionmental Investigations Standard Operating Procedures and Quality Assurance Manual, Environmental Quality Control, South Carolina Department of Health and Environmental Control, Entire Document

21SCBCH **SC Dept of Health & Environmental Control**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BCHWATSM	Beach Monitoring Water Sampling	Water Sampler		

21SCESOP **SC Dept. of Health & Environmental Control**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SWCS	Surface Water Composite Sample	Water Sampler	A volume of two liters was collected weekly and put in a five gallon (19.0L) Nalgene carboy for the individual locations of Jackson Boat Landing (SV-2010), Upper Three Runs (SV-325), Beaver Dam Creek (SV-2040), Fourmile Branch (SV-2039), Pen Branch (SV	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
SWGS	Surface Water Grab Sample	Water Sampler	Collecting a sample using the grab method involved filling a container with water directly from the water body.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --

21SCGW **SC Dept. of Health & Environmental Control**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
AGWSC	Ambient Groundwater Sample Collection	Water Sampler		

21SCSANT Santee Cooper - South Carolina Public Service Authority

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
AIR TEMP	Ambient Air Temperature (C)	Miscellaneous/Other	Ambient temperature is measured utilizing a Fisher Scientific Model 15-021-5B thermometer in shade.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
CHPYL A	Chlorophyll a (ug/l)	Miscellaneous/Other	Chlorophyll a samples are collected in an amber 250 ml opaque HPDE bottle. Samples are filtered in the laboratory in 15 ml triplicates utilizing 25 mm type A/E filters treated with magnesium carbonate solution (1% by volume).	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
COND	Conductivity (mmhos)		Conductivity is measured in-situ, utilizing a cell with four nickel electrodes.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
DO	Dissolved Oxygen (mg/l)		Dissolved Oxygen measurements are sampled in-situ, utilizing the electrode membrane method.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
FLOW	Stream Flow (cfs)	Miscellaneous/Other	Stream flow data is collected utilizing a Price pygmy or AA flow meter.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
LAB	General Laboratory Analyses	Water Sampler		American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
LEGACY SCP	Legacy Sample Collection Procedure			
METALS-S	Metals (Sediment)	Benthic Dredge	Samples are collected utilizing a Ponar mini-dredge. All debris is removed before placement in a 250 ml nalgene container. All samples are preserved in ice only - no acidification is required.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
NUTRNT-S	Nutrients (Sediment)	Benthic Dredge	Samples are collected utilizing a Ponar mini-dredge. All debris is removed before placement in a 250 ml nalgene container. All samples are preserved in ice only - no acidification is required.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
PH	pH (SU)	Miscellaneous/Other	pH measurements are sampled in -situ utilizing a glass probe which is part of a YSI multi-parameter sonde.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
WTR TEMP	Water Temperature (C)	Miscellaneous/Other	Water temperature is measured in-situ by lowering the temperature probe in the water, profiling from	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --

21SCSANT **Santee Cooper - South Carolina Public Service Authority**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
			top to the bottom of the water column.	

21SCSHL **SC Dept of Health and Environmental Control**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
WQ SAMP	Collection of water for field analysis	Water Sampler		

21WIS **Wisconsin Dept. of Natural Resources**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Water Grab Sample			
SP-002	Integrated Grab Sampler			

22LAGWTR **Louisiana Dept of Environmental Quality**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BMP-QAPP	Baseline Monitoring Project Quality Assurance Project Plan			Baseline Monitoring Project, 1999, Baseline Monitoring Project, Quality Assurance Project Plan, LDEQ, 198pp

31DELRBC **Delaware River Basin Commission**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
MACROINVER	Macroinvertebrates	Trap/Substrate		
WATER1	Water Sample Collection			

31DRBCSP Delaware River Basin Commission

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
DEWAWATER	Routine Ambient Water Collection by NPS-DEWA	Water Sampler	Sample bottle attached to rope dropped from various bridges to collect ambient water sample	
UPDEWATER	Routine Ambient Water Collection by NPS-UPDE	Water Sampler	Water Collected either from bridge or by wading into stream where applicable and safe.	
WATER	Water Sample	Water Sampler	Bottle attached to line or collected by wading	

31ISC2RS Interstate Sanitation Commission

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
ISC-SC-1	Ambient water sample collection	Water Sampler	Using the gear identified in the Gear and Equipment section, samples are collected from ambient waters for the examination of coliform species, chlorophyll a or phytoplankton.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition

31ORWUNT **Ohio River Sanitation Commission**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
01	Grab Sample	Water Sampler	A Bailer is lowered into the river at the depth of 1.5 meters. When the Bailer is full, it is retrieved and the water is transferred to a 2 liter plastic carboy. Transfer water from the carboy to laboratory bottles with proper preservative.	USEPA, 1983, Methods for Chemical Analysis of Water and Wastes, USEPA, EPA 600/4-79-020

ARDEQH2O **Arkansas Dept. of Environmental Quality**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
AMBIENT	Ambient and routine water samples	Water Sampler	Water samples are taken from streams and other waterbodies using a variety of gear. They include using only the sample bottle or using a sample bucket to take the sample.	
LAKES	Lake Samples	Water Sampler	Surface water samples collected in lakes are usually collected by submerging the water bottle and filling to a specified capacity. Samples collected at depth are taken using a horizontal, alpha water sampling bottle.	

BEAR_CRK **Bear Creek Reservoir**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab sample			
SAMPLER	Van Dorn Bottle			

BRIGHTON **City of Brighton**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	Unknow			

BUNKER **Bunker Hill Mining and Metallurgical Complex**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BHGSP	Bunker Hill Generic Sampling Procedure		This is a generic sampling procedure placeholder for all of the CdA - Bunker Hill sampling activities	

CADWR **California Department of Water Resources**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
DWREMP	DWR Sample Collection Procedures	Water Sampler		

CAPECRD **City of Cape Coral (Florida)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BIO-GRAB	Water grab sampling for biocides		Water sample taken by hand by submerging bottle just below the surface.	
HM-PONAR	Heavy Metal Sediment Sampling		Petite Ponar grab of sediments for heavy metal analysis.	
WQ-GRAB	Water quality grab sampling.		Water samples collected for water quality sampling. Surface samples normally taken by submerging bottles just below the surface. Middle and bottom samples taken with a VanDorn water sampler.	
WQ-WPAK	Coliform bacteria sampling.	Miscellaneous/Other	Water sample taken just below the surface in a Whirl Pak for bacteria testing.	

CCAMP **Central Coast Ambient Monitoring Program**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
CCAMP03	Water Column Grab Sampling			
CCAMP_FP01	Water Quality Grab Sampling	Water Sampler	Water samples are collected below the water surface, facing the current, by inverting the bottle before submerging. Lids are immediately applied, and physical contact with lid and rim of bottle are avoided. Bottles are labled and stored at 4C.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
CCAMP_FP02	Multi-probe Deployment	Water Sampler	The multi-analyte probe is maintained on a stable stand inside the field vehicle. A sampling container is rinsed several times with water from the site and is filled for immediate analysis by the probe. Data is both stored electronically and on paper.	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --

CHATFLD **Chatfield Reservoir**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FIELD	Unknown			
GRAB	Grab Sample			
METER	Field Measurements Using Horriba U-10 Meter		Meter measures conductivity, dissolved oxygen, pH, and temperature in the field at the site	
SAMPLER	Kemmerer -type sample device			
SEDIMENT	Sediment Sampling			

Sample Collection/Creation Procedures

CITYFTCO **City of Fort Collins**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Sampling Procedure, River	Water Sampler		

CORIVWCH **The Rivers of Colorado Water Watch Network (RiverWatch)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	unknown			

CT_DEP01 **Connecticut Dept. of Environmental Protection**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BACTGRAB	Indicator Bacteria Grab Sample	Water Sampler	A 125 ml sterile nalgene water bottle is dipped below the surface of waste deep bathing water. An air space of 1" is left in the bottle to facilitate mixing prior to analytical prep.	CTBEACHQAPP - Ernest Pizzuto, 2003, QAPP-Indicator bacteria monitoring of state-owned and managed bathing areas, CT DEP Ambient Monitoring Program, revison 1 page 1

CWSD **Centennial Water and Sanitation District**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	UNKNOWN DEFAULT			

DEMOTEST **The Commission for a Good Clean Chesapeake Bay**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Water Grab Sampling	Water Sampler	See below, using any of the water sampler listed in the gear configuration section.	CGCCB_SOPS - Commission for a Good Clean Chesapeake Bay, 1991, Standard Procedures for Sampling the Chesapeake Bay, Virginia Beach Press, 290 pp
SP-002	Sediment Sampling	Benthic Grab	Sediment sampling devices are the same regardless of whether the sample is collected for chemistry, grain size, or benthic infauna analyses. Enough sediment is collected to support all three analyses types.	SAMPLE_CB - Dr. Lee Manning, 1987, Sampling the Chesapeake Bay for Fun and Profit, University of Virginia Press, 589 pp
SP-003	Fish Tissue Extraction		This method is designed to allow the researcher to remove tissue without contamination.	SAMPLE_CB - Dr. Lee Manning, 1987, Sampling the Chesapeake Bay for Fun and Profit, University of Virginia Press, 589 pp
SP-004	Electroshock Fish Survey Procedure	Electroshock	A repeated stream sweep, conducted with the heavy duty electroshock unit. Fish not fried by device are to be returned alive to the stream.	CGCCB_SOPS - Commission for a Good Clean Chesapeake Bay, 1991, Standard Procedures for Sampling the Chesapeake Bay, Virginia Beach Press, 290 pp
SP-005	Compositing of Water Samples for Low Level Organics	Miscellaneous/Other	Handling and container standard procedures for the combinig of water samples into composites for furhter analysis.	CGCCB_SOPS - Commission for a Good Clean Chesapeake Bay, 1991, Standard Procedures for Sampling the Chesapeake Bay, Virginia Beach Press, 290 pp
SP-006	Compositing of Fish Tissue for Pesticides Analysis	Miscellaneous/Other	Sterile methods for the handling of tissue specimens as they are combined for later analysis.	CGCCB_SOPS - Commission for a Good Clean Chesapeake Bay, 1991, Standard Procedures for Sampling the Chesapeake Bay, Virginia Beach Press, 290 pp
SP-007	Netting Fish for Tissue Samples	Net/Non-Tow	Using night lighting as a lure, fish in shallow water will rise to the surface and wait to be netted by the researcher.	SAMPLE_CB - Dr. Lee Manning, 1987, Sampling the Chesapeake Bay for Fun and Profit, University of Virginia Press, 589 pp
SP-008	Macroinvertebrate Sampling	Net/Non-Tow	This procedure for the deployment and handling of the 1-meter kick net is used for small stream riffle collection of macroinvertebrates.	SAMPLE_CB - Dr. Lee Manning, 1987, Sampling the Chesapeake Bay for Fun and Profit, University of Virginia Press, 589 pp
SP-009	Otter Trawl Operation and Collection	Net/Horizontal Tow	Procedures for the deployment, recovery, and pre- and post- sample cleaning procedures for the	CGCCB_SOPS - Commission for a Good Clean Chesapeake Bay, 1991, Standard Procedures

DEMOTEST **The Commission for a Good Clean Chesapeake Bay**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
			Otter Trawl.	for Sampling the Chesapeake Bay, Virginia Beach Press, 290 pp
SP-010	Plankton Collection, open water	Net/Vertical Tow	Deployment and recovery of the vertical plankton net.	SAMPLE_CB - Dr. Lee Manning, 1987, Sampling the Chesapeake Bay for Fun and Profit, University of Virginia Press, 589 pp

EMAP-CS **Environmental Monitoring and Assessment Program**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
COLLECT-01	Water, Subsamples-Nutrient, Chlorophyll a, and TSS: NCA-NE	Water Sampler	A seawater sample was collected from 1m below the surface, mid-water and 1m above the bottom (depth dependent) with a 5L Go-Flo® sampling bottle. At some shallow locations (water depth < 3 m) only one mid-depth water sample was taken. Duplicate water samples from the same cast were filtered aboard ship with 0.7-micron glass-fiber filter pads (not all duplicates were analyzed). The filtered water (stored in a 60 ml Nalgene bottle for nutrient analyses) and the filters (foil wrapped and placed in whirlpack for chlorophyll analysis) were immediately frozen on dry ice for shipping. Approximately 1 liter of unfiltered seawater was stored in a 1 L polypropylene bottle and stored at 4 deg C to await analysis for suspended solids.	C.J. Strobel, 2000, Coastal 2000 - Northeast component: field operations manual, USEPA NHEERL, Atlantic Ecology Division, Narragansett, RI, 68 p
COLLECT-02	Biota, Benthic Infaunal Community - Van Veen Grab	Benthic Grab	Generally three Van Veen sediment grabs were sieved through a 0.5 mm sieve. All materials retained on the sieve were placed in a separate plastic container and fixed with buffered formalin/Rose Bengal fix.	D. Reifsteck, C. Strobel (SAIC) and D. Keith (USEPA), 1993, EMAP-Near Coastal 1993 Virginian Province Field Operations and Safety Manual, U.S. Environmental Protection Agency, 172 p
COLLECT-03	Biota, Benthic Infaunal Community-Benthic Grab: EMAP-West	Benthic Grab	One sediment grab collected with a 0.1 m2 Van Veen grab sampler was sieved through a stacked (nested) set of sieves; 1.0 mm sieve prior to a 0.5 mm sieve. All organisms retained on each sieve were placed in separate wide-mouth, Nalgene containers and preserved with buffered formalin (10% final concentration with Rose Bengal added). At the laboratory, the formalin-fixed samples were transferred to 70% ethanol within 2 weeks of field collection to avoid undue deterioration of sample integrity that would further complicate identification (e.g., loss of heads/appendages and erosion of shells or exoskeletons).	U.S. Environmental Protection Agency, 2001, EMAP-National Coastal Assessment Quality Assurance Project Plan 2001-2004, USEPA, NHEERL Gulf Ecology Division, Gulf Breeze, FL, 202 p

EMAP-CS **Environmental Monitoring and Assessment Program**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
COLLECT-04	Biota, Trawl Fish and Shellfish Collection	Net/Horizontal Tow	Trawls will be conducted by using a 16-ft otter trawl and the duration of the trawl will be for 10+-2 minutes at an over bottom speed of 3-4 knots. Replicate (two) trawls will be performed. The trawl straight line tow has Sampling Station at its center.	Tom Heitmuller, USGS, 2001, Quality Assurance Project Plan; EMAP-West-Coastal Monitoring, USEPA: EMAP, Gulf Breeze Laboratory, 152 p
COLLECT-05	Sediment, Surficial Layer:Grain/TOC/Toxicity Composites-NCA	Benthic Grab	Multiple sediment grabs were collected from each site using a Young-modified Van Veen grab or similar sampler. Each grab was nominally 440 cm2 in area and up to 10 cm in depth, but only the top two centimeters of a grab were retained for the analyses described here. A sufficient number of grabs were processed to provide three liters of sediment. The sediment composite was homogenized and separated into two fractions for storage until analysis. One fraction was frozen and used in the analysis of TOC, percent moisture and the measurement of the chemical contaminants. The second fraction was chilled but never frozen during storage, and was used for grain-size and toxicity analyses.	U.S. Environmental Protection Agency, 2001, EMAP-National Coastal Assessment Quality Assurance Project Plan 2001-2004, USEPA, NHEERL Gulf Ecology Division, Gulf Breeze, FL, 202 p
COLLECT-06	Water column sampling: EMAP-West	Water Sampler	Water column data loggers with probes used to make in situ measurements on a down cast through the water column. Equipment includes Seabird CTDs, Hydrolabs, YSI meters and LICOR light meters, including Li-Cor LI-193SA and Li-Cor LI-190SA models.	U.S. Environmental Protection Agency, 2001, National Coastal Assessment: Field Operations Manual, USEPA NHEERL, Gulf Ecology Division, Gulf Breeze, FL, 72
COLLECT-07	Biota, Benthic Infaunal/Epifaunal Community - Van Veen Grab	Benthic Grab	One Van Veen sediment grab is sieved through a 0.5 mm sieve. Organisms retained on the screen were placed in plastic containers and fixed in 10% buffered formalin with rose bengal stain for preservation.	C.J. Strobel, 2000, Coastal 2000 - Northeast component: field operations manual, USEPA NHEERL, Atlantic Ecology Division, Narragansett, RI, 68 p
COLLECT-4F	Trawl-Fish Collection: 2000 NCA-NE	Net/Horizontal Tow	The EPA standard fish trawl was conducted which filters fish from the near bottom waters. The trawl net is a funnel-shaped high-rise	J. Kiddon, H. Buffum, 2002, EMAP-NCA Northeast 2000 Fish Trawl Metadata, U.S. Environmental Protection Agency, 9 p

EMAP-CS **Environmental Monitoring and Assessment Program**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
			sampling trawl. The net includes a 16 meter tow line, a chain sweep, 5 cm mesh wings, and a 2.5 cm cod end. Fish were herded into the net by ground wire and an overhanging panel. Standard trawls were 10 ± 2 minutes in duration with a towing speed of 2-3 knots through the water against the prevailing current (1-3 knots relative to the bottom). Different state cooperative agreements used different standard procedures: CT, MA and RI trawl duration was 20 minutes; NH was 4 minutes. Therefore, fish commnunity measures cannot be easily compared across all states.	
CREATES-1	Sediment, composite subsample:Organic contaminants-EMAP-West	Benthic Grab	Sediment from a minimun of two grabs will be mixed and approximately 500 cc of the composited sediment will be placed in a clean, prelabeled, glass wide-mouth, 1-pint Mason jar or I-Chem jar.	Tom Heitmuller, USGS, 2001, Quality Assurance Project Plan; EMAP-West-Coastal Monitoring, USEPA: EMAP, Gulf Breeze Laboratory, 152 p
CREATES-2	Sediment, composite subsample:inorganic contaminants-E-West	Benthic Grab	Sediment from a minimum of two grabs will be mixed and approximately 200 cc of composited sediment will be placed in a clean, prelabeled, wide-mouth Nalgene jar.	Tom Heitmuller, USGS, 2001, Quality Assurance Project Plan; EMAP-West-Coastal Monitoring, USEPA: EMAP, Gulf Breeze Laboratory, 152 p
CREATES-3	Sediment, Toxicity Test Sediment: EMAP-West	Benthic Grab	Sediment from a minimum of two grabs will be mixed and approximately 2000-4000 cc (depends on the number of toxicity tests to be performed) of composited sediment will be placed in a clean, prelabeled, wide-mouth Nalgene jar.	U.S. Environmental Protection Agency, 2001, National Coastal Assessment: Field Operations Manual, USEPA NHEERL, Gulf Ecology Division, Gulf Breeze, FL, 72
CREATES-4	Sediment, TOC and grain: EMAP-West	Benthic Grab	Sediment from a minimum of two grabs will be mixed. Approximately 100 cc of composited sediment will be placed in a small, preclean, prelabeled glass sampling jar and stored at 4 deg C for TOC analysis. Approximately 100 cc of composited sediment will be placed into a clean, prelabeled plastic (HDPE) jar and stored at 4 deg C for sediment grain analysis.	U.S. Environmental Protection Agency, 2001, National Coastal Assessment: Field Operations Manual, USEPA NHEERL, Gulf Ecology Division, Gulf Breeze, FL, 72
CREATES-5	Sediment, Composite	Benthic Grab	Sediment from a min of three grabs will be	R. Valente and C. Strobel, 1993, EMAP-

EMAP-CS **Environmental Monitoring and Assessment Program**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
	Subsample for Inorganic Contaminants-VP		thoroughly mixed and approximately 100-150 cc of composited sediment will be placed in a clean, prelabeled, 250-ml HPDE wide-mouth bottle.	Estuaries Virginian Province: Quality Assurance Project Plan for 1993, U.S. Environmental Protection Agency, Office of Research and Development, 136 p
CREATES-6	Sediment, Composite Subsample for Organic Contaminants-VP	Benthic Grab	Sediment from a min of three grabs will be thoroughly mixed and approximately 250-300 cc of composited sediment will be placed in a precleaned, prelabeled, 500-ml glass wide-mouth jar.	R. Valente and C. Strobel, 1993, EMAP-Estuaries Virginian Province: Quality Assurance Project Plan for 1993, U.S. Environmental Protection Agency, Office of Research and Development, 136 p
CREATES-7	Sediment, Composite Subsample for Acid Volatile Sulfides-VP	Benthic Grab	Sediment from a min of three grabs will be thoroughly mixed and approximately 125 ml of composited sediment will be placed in a prelabeled, 125-ml polypropylene wide-mouth bottle.	R. Valente and C. Strobel, 1993, EMAP-Estuaries Virginian Province: Quality Assurance Project Plan for 1993, U.S. Environmental Protection Agency, Office of Research and Development, 136 p
CREATES-8	Sediment, Composite Subsample for Inorganic Contaminants-NCA	Benthic Grab	Only the top two-centimeter section from a min of three grabs will be thoroughly mixed and approximately 100-150 cc of composited sediment will be placed in a clean, prelabeled, 250-ml HPDE wide-mouth bottle.	U.S. Environmental Protection Agency, 2001, National Coastal Assessment: Field Operations Manual, USEPA NHEERL, Gulf Ecology Division, Gulf Breeze, FL, 72
CREATES-9	Sediment, Composite Subsample for Organic Contaminants-NCA	Benthic Grab	Sediment from a min of three grabs will be thoroughly mixed and approximately 250-300 cc of composited sediment will be placed in a precleaned, prelabeled, 500-ml glass wide-mouth jar.	C.J. Strobel, 2000, Coastal 2000 - Northeast component: field operations manual, USEPA NHEERL, Atlantic Ecology Division, Narragansett, RI, 68 p
CREATEW-2	Water, Subsamples-Nutrient, Chlorophyll a, TSS: EMAP-West	Water Sampler	Nutrients and chlorophyll a: a disposable, graduated 50-cc polypropylene syringe fitted with a stainless steel or polypropylene filtering assembly was used to filter a parent water sample through 47 mm GF/F filters. 100-1,500 ml seawater was filtered. 1 ml of saturated MgCO3 was then filtered through each pad to buffer the chlorophyll sample against degradation. Approximately 40 ml of filtrate was preserved for nutrient analyses in a 60 ml Nalgene bottle. Total suspended solids: approximately 1 liter of	U.S. Environmental Protection Agency, 2001, National Coastal Assessment: Field Operations Manual, USEPA NHEERL, Gulf Ecology Division, Gulf Breeze, FL, 72

EMAP-CS **Environmental Monitoring and Assessment Program**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
			unfiltered seawater was taken from the water sampler at discrete depths and poured into a 1 L polypropylene bottle.	

EPA_R7 **US EPA Region 7**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SECCHI	secchi disk transparency			

FLPRMRWS **Peace River Manasota Regional Water Supply Authority**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	grab sample			

GLENDALE **City of Glendale**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	Unknown			

IL_EPA **Illinois EPA**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
IL_EPA	DEFAULT SAMPLE COLLECTION PROCEDURE	Miscellaneous/Other		

IOWATER **Iowa Volunteer Water Monitoring Program**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
IOWATER01	IOWATER Volunteer Monitoring Sample Collection			Rich Leopold et al., 2001, IOWATER Training Manual, IDNR, Rev. 4/2001

KWMNDATA **Keystone Watershed Montioring Network (Pennsylvania)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BACTERIA	Bacteria Sampling for Center in the Park SEC	Miscellaneous/Other	Bacteria Sampling and testing for Center in the Park Senior Environment Corps. CIP monitors and collects samples, and Chestnut Hill College conducts the lab work.	Citizens' Volunteer Monitoring Program, 2001, Sampling of Surface Waters for Recreational Use Suitability, Pennsylvania Department of Environmental Protection, pp. 1-4
MACRO	Macroinvertebrate Count	Miscellaneous/Other		
MSLM	Mountain Springs Lake Monitoring	Water Sampler	Used a Van Dorn Water Sampler	Unknown, 19--, No Cite - Method Not Cited, Unknown, Vol --
TSS	Total Suspended Solids			

LAKELAND City of Lakeland

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
HWBACTI	Bacteria sampling on Lake Hollingsworth	Water Sampler		American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
L1	Water Quality Sampling	Water Sampler	Field sampling for water quality in various city lakes.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
L2	Macroinvertebrate Sampling	Benthic Grab	MAcroinvertebrate sampling in various city lakes, using petite ponar or ekman dredge.	USEPA, Donald J. Klemm, Philip A. Lewis, Florence Fulk, and James M. Lazorchak, 1990, Macroinvertebrate Field and Laboratory Methods for Evaluating the Biological Integrity of Surface Waters, USEPA, Environmental Monitoring Systems Laboratory- Cincinnati, Office of Research and Development, 600/4-90/030
L3	Phytoplankton Sampling - grab sample	Miscellaneous/Other	Grab sample of Phytoplankton for various city lakes	Dr. St. Amand, A., 1990, HPMA Method for producing algal sample slides for Phytoplankton Analysis, University of Notre Dame, 1
L4	field observation		secchi disk	Hydrolab, 1999, Field Observations, City of Lakeland, 1

MDEDAT01 Maryland Dept. of the Environment Dredging Ambient Data

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
1	Collection of the Benthos	Benthic Grab	A 0.0529 cubic meter Ponar Dredge is used to collect benthic samples. Three Ponar replicates are collected from each station. Samples are rinsed over a 0.5-mm sieve to separate the benthos from the sediments.	
2BGVV	Collection of Benthos with Van Veen	Benthic Grab	A 0.1 m2 Van Veen is used to collect benthic samples. Three samples are collected from each station. Samples are rinsed over a 0.5-mm sieve to separate the benthos from the sediments.	
3BCGR	Gravity Core of the Benthos	Benthic Corer	Core samples of the benthos are collected using a Benthos-type gravity corer (Model #2171) with clear cellulose acetate butyrate liners, (diameter of 6.3).	
4BGPT	Peterson Grab	Benthic Grab	A Peterson Grab is used to collected the upper 8 - 10 cm of sediment at each station. Sample area of the Peterson Grab is 305 x 305 mm and the volume is 9890 mL.	

MDEDAT03 **Maryland Dept. of the Environment Toxics Data**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Water Grab Sampling			

MDEDAT08 **Maryland Dept. of the Environment Beaches Data**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-001	Water Grab Sampling			

MDEDAT09 **Maryland Dept. of the Environment Risk Assessment Data**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-003	Fish Tissue Extraction	Miscellaneous/Other		
SP-006	Compositing of Fish Tissue for Pesticides Analysis	Miscellaneous/Other		
SP-007	Netting Fish For Tissue Sample	Net/Non-Tow		
SP-009	Otter Trawl Operation and Collection	Net/Horizontal Tow		

MNPCA1 Minnesota Pollution Control Agency

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
CF	Composite sample with auto-sampler	Water Sampler	Composite sample with auto-sampler	
CF-F	Composite sample, flow-weighted/flow-paced with auto-sampler	Water Sampler	Composite sample, flow-weighted/flow-paced with auto-sampler	Minnesota Pollution Control Agency Quality Assurance Program, 2000, www.pca.state.mn.us/programs/qa_p.html, Minnesota Pollution Control Agency, all pages
CF-T	Composite sample, flow-weighted/time-paced with auto-sampler	Water Sampler	Composite sample, flow-weighted/time-paced with auto-sampler	Minnesota Pollution Control Agency Quality Assurance Program, 2000, www.pca.state.mn.us/programs/qa_p.html, Minnesota Pollution Control Agency, all pages
CM	Composite sample from multiple locations	Water Sampler	Composite sample from multiple locations on a waterbody, combined with a churn splitter.	Minnesota Pollution Control Agency Quality Assurance Program, 2000, www.pca.state.mn.us/programs/qa_p.html, Minnesota Pollution Control Agency, all pages
CT-T	Composite sample, Flow-triggered, Time-paced	Water Sampler	Automatic sampling at regular time intervals triggered by a pre-set increase in stream water level.	
G	Grab sample	Water Sampler	Submerge and fill a water sampling vessel, or sample directly into the sample bottle provided by the analytical laboratory, at a single point in a waterbody.	Minnesota Pollution Control Agency Quality Assurance Program, 2000, www.pca.state.mn.us/programs/qa_p.html, Minnesota Pollution Control Agency, all pages
LKDEPTH	Lake depth point sampling	Water Sampler	Lake water is sampled at a discrete depth in the water column using a vertical Kemmerer- or Van Dorn-type sampler.	Minnesota Pollution Control Agency Quality Assurance Program, 2000, www.pca.state.mn.us/programs/qa_p.html, Minnesota Pollution Control Agency, all pages
LKSURF2M	Lake surface 2-meter depth-integrated sampling	Water Sampler	Sample is collected by lowering a 2-meter-long, 2-inch-diameter PVC pipe vertically into the water, capturing the water in the pipe by stoppering the top end, raising the tube, and then releasing the water into a 2L bottle by removing the stopper.	Minnesota Pollution Control Agency Quality Assurance Program, 2000, www.pca.state.mn.us/programs/qa_p.html, Minnesota Pollution Control Agency, all pages
METALS1	Continuous-flow sampling, Clean Hands technique	Water Sampler	Lower teflon collection tube to a representative depth of the waterbody. Pump water into sample collection bottles. Tubing was cleaned with site	USEPA, 1996, Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels., USEPA, EPA 821/R-96-008

MNPCA1 **Minnesota Pollution Control Agency**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
			water for 20 minutes between station visits.	

MNPCAG **Minnesota Pollution Control Agency ground water data**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SW-BASIC	Generic GW Sampling			
SW-GAS	Gas Sampling			
SW-SOIL	Soil Sampling			

MONT-DEQ Montana Department of Environmental Quality

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
1	Unknown, Historic Data, Migrated from STOREASE in May 1999		STOREASE contained data downloaded from the mainframe STORET system and data that was entered directly into the PC-based STOREASE system. STOREASE contained many more fields and attributes than allowed in the 'old' STORET System.	
CHLORPHYL2	Chlorophyll, rock substrate		Modification of the APHA procedure for sampling & extraction. Entire rocks sampled & chlorophyll extracted - surface area calculated w/ special procedure. See MT SOP for method details. Post-extraction analytical procedure is standard.	Montana Department of Environmental Quality, 1995, Standard Operating Procedures Manual, MT DEQ, 1
COMP-H2O	Composite Sample, water		Collected by combining equal volumes of two or more grab samples collected at a fixed interval of time.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
DI	Depth Integrated Water Sample	Water Sampler		
FLBS-IVS	FLBS Integrated Vertical Sample, Water	Water Sampler	Nalgene PUR ester grade tubing. An individual vertical integrated sample collected in a Nalgene PUR ester grade hose, mixed in a HDPE carboy, and a single subsample poured into a sample bottle. Clean hose, carboy and sample bottle are rinsed on site.	
FLBS-VD	FLBS Van Dorn Sample, Water	Water Sampler		
GRAB	Grab Sample, water		An individual discrete sample collected over a period of time not > 15 minutes. Clean bottles are rinsed on site - sample is collected using MT DEQ SOP	Montana Department of Environmental Quality, 1995, Standard Operating Procedures Manual, MT DEQ, 1
GRAB-BACT	Grab Sample, Water Bacteriology		Grab samples for water bacteriology are taken using a standard grab procedure with a sterile sample collection bottle provided by the analytical laboratory. Care is taken not to touch the inside of the bottle or lid.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
GRAB-X3	Grab Sample, water, three		An individual discrete sample collected over a	Montana Department of Environmental Quality,

MONT-DEQ Montana Department of Environmental Quality

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
	sample bottles		period of time not > 15 minutes. Clean bottles are rinsed on site - sample is collected using MT DEQ SOP - 2.5 L total - three containers for nutrients, metals, solids & commons.	1995, Standard Operating Procedures Manual, MT DEQ, 1
GW	Ground Water Sampling, bailer	Water Sampler	Groundwater sampling is accomplished by bailing or pumping - quantity of water removed before sample taken so sample is representative of water in the formation.	Montana Power Company, Environmental Engineering Department, Colstrip Project Division, 1997, Water Resources Monitoring Plan, Colstrip Project Division, Environmental Engineering Department, Colstrip Project Division, Montana Power Company, Rev 3, June 25 1997
MACRO-HESS	Macroinvertebrate Sampling, Hess Sampler	Trap/Substrate		Montana Department of Environmental Quality, 1995, Standard Operating Procedures Manual, MT DEQ, 1
MACRO-KICK	Macroinvertebrate, Traveling Kick	Net/Non-Tow	This procedure for the deployment and handling of the 1-meter kick net is used for small stream riffle collection of macroinvertebrates. (Standard D net and travelling kick per MT DEQ SOP)	Montana Department of Environmental Quality, 1995, Standard Operating Procedures Manual, MT DEQ, 1
PERI-1	Periphyton Sampling, scraped substrate		Scrape the entire surface of several rocks, lifting the algal film off from nearshore sediments. A stainless steel teaspoon is a good all-around tool for collecting microalgae.	Montana Department of Environmental Quality, 1995, Standard Operating Procedures Manual, MT DEQ, 1
SED-1	Sediment Collection, Sieved (.062 mm)		Saturated sediment is collected and sieved in the field via gravity through a 0.062mm nonmetallic mesh inserted onto a large diameter plastic funnel. Site water is used to wet sieve 100 grams of fines into a large wide-mouth container.	Montana Department of Environmental Quality, 1995, Standard Operating Procedures Manual, MT DEQ, 1

MT-DEQ **Montana DEQ**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
25-CM2	Periphyton sampling, template (25cm2) scraped substrate		A flexible template (25cm2) is placed over stones along the transect. The area within the template is scraped/scrubbed clean. Samples are analyzed for chlorophyll a. Method is used for diatom or Nostic films or short uniform growths of attached filaments	
5.7-CM2	Periphyton Sampling, core sample 5.7cm2 area		Core sample of the bottom is collected using a cut-off 60 cc syringe. After collecting several vertical inches of sediment the core is extracted all is discarded except for the upper 1 cm. This is analyzed for chlorophyll a and corrected for phaeophytins	
710-CM2	Periphyton Sampling, metal hoop (710cm2)		Metal hoop (710 cm2) is placed over bottom of stream and the bulk of all algal or macrophyte material within the hoop is collected. This captures plant material including that in the water column (vertically integrated).	
BACT	Grab Sample, Water Bacteriology		Grab samples for water bacteriology are taken using a standard grab procedure with a sterile sample collection bottle provided by the analytical laboratory. Care is taken not to touch the inside of the bottle or lid.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
CHLPHL-2	Chlorophyll, rock substrate		Modification of the APHA procedure for sampling & extraction. Entire rocks sampled & chlorophyll extracted - surface area calculated. See MT SOP for method details. Post-extraction analytical procedure per Standard Methods (APHA).	American Public Health Association, 1998, Standard Methods for the Examination of Water and Wastewater, 20th Edition., American Public Health Association, 20th Edition
COMP-H2O	Composite Sample, water		Collected by combining equal volumes of two or more grab samples collected at a fixed interval of time.	MT DEQ MDM, 1995, Standard Operating Procedures Manual, Montana Department of Environmental Quality, Volume 1
DI	Depth Integrated Water Sample	Water Sampler		
GRAB	Grab Sample, water		An individual discrete sample collected over a period of time not > 15 minutes.	MT DEQ MDM, 1995, Standard Operating Procedures Manual, Montana Department of Environmental Quality, Volume 1

MT-DEQ Montana DEQ

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB-X3	Grab Sample, water, three sample bottles		An individual discrete sample collected over a period of time not > 15 minutes. Clean bottles are rinsed on site - sample is collected using MT DEQ SOP - usually about 2.5 L total - three separate containers for nutrients, metals, & solids/commons.	MT DEQ MDM, 1995, Standard Operating Procedures Manual, Montana Department of Environmental Quality, Volume 1
GW-BAILER	Ground Water Sampling, bailer	Water Sampler	Groundwater sampling is accomplished by bailing or pumping - quantity of water removed before sample taken so sample is representative of water in the formation.	
HESS	Macroinvertebrate Sampling, Hess Sampler	Trap/Substrate		
IG	Integrated Grab		Integrated sample collected from different points simultaneously, or within the time frame of a single discreet sample. Typically, a mixture of samples representing various points in the stream cross-section proportional to relative flow.	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
JAB	JAB Macroinvertebrate sample collection using standard D-Net	Net/Non-Tow		
KICK	Macroinvertebrate, Traveling Kick	Net/Non-Tow	This procedure for the deployment and handling of the 1-meter kick net is used for small stream riffle collection of macroinvertebrates. (Standard D net and travelling kick per MT DEQ SOP)	MT DEQ MDM, 1995, Standard Operating Procedures Manual, Montana Department of Environmental Quality, Volume 1
PERI-1	Periphyton Sampling, scraped substrate		Scrape the entire surface of several rocks, lifting the algal film off from nearshore sediments. A stainless steel teaspoon is a good all-around tool for collecting microalgae.	MT DEQ MDM, 1995, Standard Operating Procedures Manual, Montana Department of Environmental Quality, Volume 1
PHYTOPLANK	Phytoplankton sampling - quantitative filtration		Phytoplankton samples are collected by filtering a known volume of water through glass fiber or membrane filters with an effective pore size of 0.45 um. For low densities collect a sample of up to 6 L. For richer eutropic waters 0.5 - 1 L.	
SED-1	Sediment Collection, Sieved		Saturated sediment is collected and sieved in the	MT DEQ MDM, 1995, Standard Operating

MT-DEQ **Montana DEQ**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
	(.062 mm)		field via gravity through a 0.062mm nonmetallic mesh inserted onto a large diameter plastic funnel. Site water is used to wet sieve 100 grams of fines into a large wide-mouth container.	Procedures Manual, Montana Department of Environmental Quality, Volume 1
UNKNOWN	Unknown Sample Collection Procedure		Specific sample collection procedure information for this sample was either unknown or unavailable at the time the data was processed for loading into STORET.	

MWRD **Metro Waste Water Reclamation District**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab Sample using water sampler	Water Sampler		
PROBE	Multiparameter Water Quality Monitoring Sonde	Miscellaneous/Other		
SECCHI	Secchi Disc			
SHOCK	Bank electrofishing unit.	Electroshock		

MWRDSTOR **Metropolitan Water Reclamation District of Greater Chicago**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
EPA METHOD	EPA Methods			USEPA, 1994, Methods for the Determination of Metals in Environmental Samples, Supplement I, USEPA, EPA 600-R-94-111
STD. METH	Standard Methods; 18th Edition			American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition

PREQB-SW **Puerto Rico**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB-001	grab sampling	Water Sampler		

R2-LAB **New York**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
BCH-HELI	Collection for Summer Helicopter Sampling	Water Sampler		
SOP2-84004	SOP for Water and Sediment Sampling from the Helicopter	Water Sampler		

R9VOL **Volunteer Monitoring Groups in EPA Region 9 (CALIFORNIA)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
FP-001	Maacama Field Procedure	Water Sampler		

Sample Collection/Creation Procedures

SACWSD **South Adams County Water and Sanitation District**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	Default Unknown			

SDWRAP **SD Dept of Environmental & Natural Resources**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SD HISTORY	Historical Procedure	Miscellaneous/Other		
SD001	Water Grab Sampling	Water Sampler	See below, using any of the water sampler listed in the gear configuration section.	
SD002	TEST	Miscellaneous/Other		

SWFMDDEP **Southwest Florida Water Management District (FLDEP)**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
GRAB	Grab sample			

TDECDOE **Tennessee Department of Environment and Conservation**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
ROUTINE	Routine sample bottle	Miscellaneous/Other	Separate sampling bottles are used for: routine (BOD, solids, hardness), metals, mercury, nutrients (COD, ammonia, NO2 & NO3, TKN, phosphate), cyanide, and microbiologicals (E. coli, enterococcus, fecal coliform, fecal streptococci).	American Public Health Association, 1992, Standard Methods for the Examination of Water and Wastewater, 18th Edition., American Public Health Association, 18th Edition
SED.-SPOON	Sediment sampling with spoons	Benthic Grab	Samples taken from streams with stainless steel spoons in areas of deposition of fine sediments (predominantly clay and silt).	
SEDIMENT	Sediment sampling with mini-ponar dredge or spoons.	Benthic Grab	Sediment sampling in the Clinch River done with a mini-ponar dredge. Sampling in tributaries done with waders and stainless-steel spoons.	

TDECWPC **Tennessee Department of Environment and Conservation**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
R	routine sample	Water Sampler		

THORNTON **City of Thornton**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
UNKNOWN	Unknown			

USFS0614 Umatilla National Forest

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
COLLECT01	ISCO	Water Sampler	ISCO water sampler, composite sample, 4 samples per day/bottle, 6 hour interval	
COLLECT02	Grabs	Water Sampler	Sample by dipping bottle into water source.	

USVIST Government US Virgin Islands

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SC-01	Ambient Water Sampling Procedure	Water Sampler	The sampler will grasp the container securely with one hand and plunge it's mouth down into the water, avoiding surface scum. Tip the bottle slightly upwards to allow air to exit and bottle to fill, leaving 1 inch air space in bottle after collecting.	Division of Environmental Protection, 2000, Standard Operationing Procedures for Ambient Monitoring, Division of Environmental Protection, 4 pages
SC-02	Effluent Grab Water Sampling Procedure	Water Sampler	Holding container with glove on plunge the container neck first into effluent leaving approximately an inch of space, tighten cap, place in cooler and take to the lab.	DPNR/DEP, 1999, SOP for Territorial Pollutant Discharge Elimination System, DPNR/DEP, 46 pages
SC-03	Effluent Composite Water Sampling Procedure	Water Sampler	Deploy samplers in proper location as indicated in approved permit. Test by switching the sample rate to manual then set sampler for 24hr samples on an hourly basis with required vol., hose length, hose size and start time. Start sample.	DPNR/DEP, 1999, SOP for Territorial Pollutant Discharge Elimination System, DPNR/DEP, 46 pages
SC-04	Sediment Bottom Sample	Benthic Dredge		
SC-05	Soil Sample	Benthic Dredge		

UTAHDWQ Utah Department Of Environmental Quality

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
DWQ-001	Water Grab Sampling	Miscellaneous/Other		
DWQ-002	Phytoplankton Sampling Gear	Water Sampler	Gear consists of 35 foot plastic tube with rope and weight on one end and a bucket	Division of Water Quality, 1996, Division of Water Quality Quality Assurance/Quality Control Manual, Division of Water Quality, 1
DWQ-003	Macroinvertabrate Modified Hess Sampling	Benthic Grab		Division of Water Quality, 1996, Division of Water Quality Quality Assurance/Quality Control Manual, Division of Water Quality, 1
DWQ-004	Macroinvertabrate Artificial Substrate Sampler	Trap/Substrate		Division of Water Quality, 1996, Division of Water Quality Quality Assurance/Quality Control Manual, Division of Water Quality, 1
DWQ-005	Macroinvertebrate kick net sampling	Net/Non-Tow	Samples macroinvertebrates with a kick net	
DWQPHYTOLO	Phytoplankton sampling in lower euphotic zone	Water Sampler	Phytoplankton sample is collected in a kemmerer bottle from 2 and 3 times the secchi depth and composited in a bucket.	
DWQPHYTOUP	Phytoplankton sampling in upper euphotic zone	Water Sampler	Phytoplankton sample is collected in a kemmerer at surface and secchi depth then composited in a bucket.	
PERIPHYTON	Periphyton Sampling Gear			
PHYTONET1	Phytoplankton samples collected by a net	Net/Vertical Tow	The net is towed from 3 times the secchi depth to the surface.	

WREQC **Wind River Environmental Quality Commission**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
IMSAMPLE	WREQC Sampling for InterMountain Lab Analyses	Water Sampler	A 100 ml polyethylene, kept at 4 degrees centigrade and with H2So4 preservative to a pH of less than 2 is used for ammonia, and nitrates. A 100 ml polyethylene bottle, kept at 4 degrees centigrade and with HN03 preservative to a pH of less than 2 is used for hardness and total recoverable metals. The rest of the analytes are prepared from a 500ml polyethylene sample bottle also kept at 4 degrees centigrade but with no preservatives. Holding times and other method details follow EPA 40 CFR Sec. 136.3.	

WSSC **Water Sentinels Sierra Club**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SC-001	sample collection procedures		procedures for macroinvertebrate sampling. see also Missouri Department of Conservation-Stream Team handbook; see also Missouri Department of Natura Resources SOPs. esp. FSS-012	USDOI, USGS, 1987, Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples, Book 5, Chapter A4., USDOI, USGS, Book 5, Chapter A4

WY-DEQ **Wyoming Dept. of Environmental Quality**

Procedure ID	Procedure Name	Gear Group Name	Description	Citation
SP-MACRO	Benthic Macroinvertebrate Sampling	Trap/Substrate	Using a previously generated random number table the Surber sample is placed at 8 random locations, moving up the riffle, to create a composite sample. Benthic macroinvertebrates are collected in the net through careful agitation of the substrate.	Plafkin, J.L., M.T. Barbour, K.D. Porter, S.K. Gross, R.M. Hughes, 1989, Rapid Bioassessment Protocols For Use in Streams and Rivers, USEPA Office of Water, EPA/444/4-89-001
SP-WATER	Water Grab Sampling	Water Sampler	These water quality characteristics are sampled on location and, as dictated by the corresponding EPA method, acidifed, refrigerated and transported for laboratory analysis.	USEPA, 1983, Methods for Chemical Analysis of Water and Wastes, USEPA, EPA 600/4-79-020